



BASIC CLINICAL TRAINING

Quantra Clinical Concepts,
Interpretation & Application
for QPlus





- Novel, patented Viscoelastic Testing (VET) technology
- Delivers reliable, actionable coagulation results in **15 minutes or less**
- Ease of use: <30 seconds to operate
- Intended to be used in the perioperative patient population at the Point of Care

Ultrasonic Stiffness Measurement

Patented **SEER** Technology:
Sonic Estimation of Elasticity via Resonance

- No mechanical disruption of the clot as it forms
- Highly sensitive to early clot formation
- Provides a high resolution to increasing clot stiffness
- Ultrasound technology is well established and trusted for assessing tissue structure

Data Acquisition

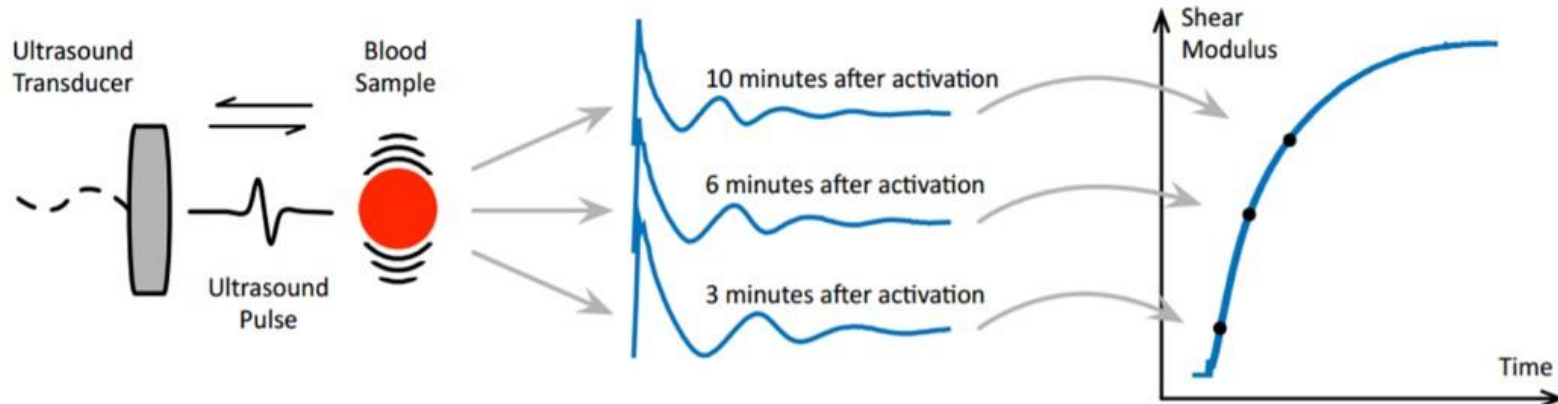
An ultrasound pulse is sent into the blood sample to generate a shear wave, causing the sample to resonate.

Displacement Estimation

As the clot vibrates during resonance, ultrasound “tracking” pulses are used to estimate the sample motion.

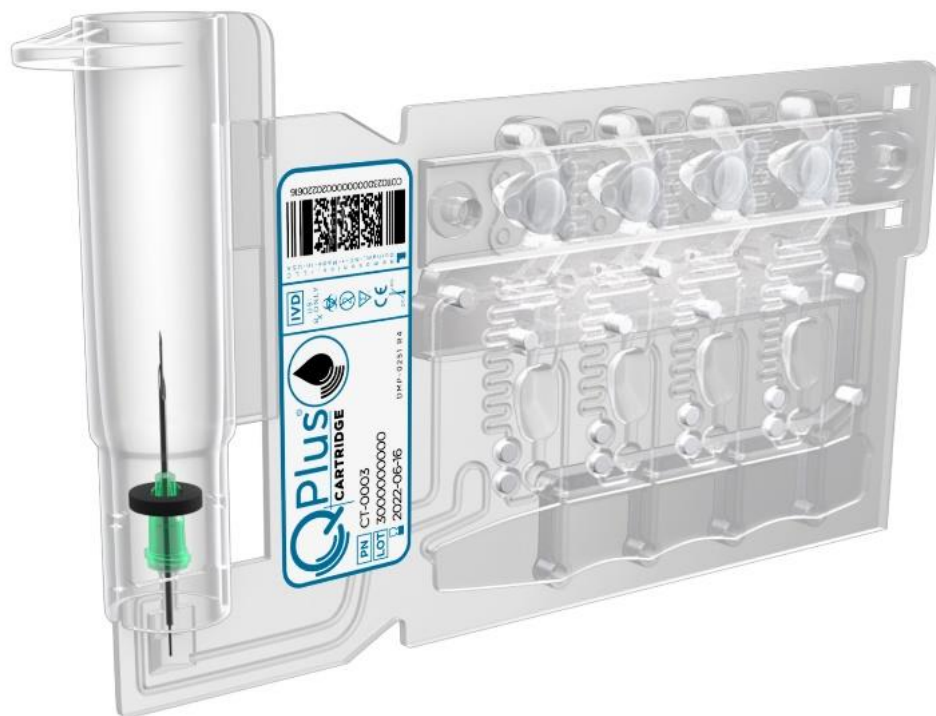
Shear Modulus Estimation

The shear modulus of the sample at a specific time point is calculated by analyzing the sample motion pattern.





Quantra[®] System Overview - Cartridge



- Single-use, self-contained system
- No pipetting required
- Hands-on time < 30 secs
- Room temperature stable
- Standard citrated blue-top
- Indicated for Cardiac and Major Orthopedic

QPlus[®] Cartridge Parameters

Designed to provide assessment of coagulation and fibrinolysis in Cardiac and Major Orthopedic

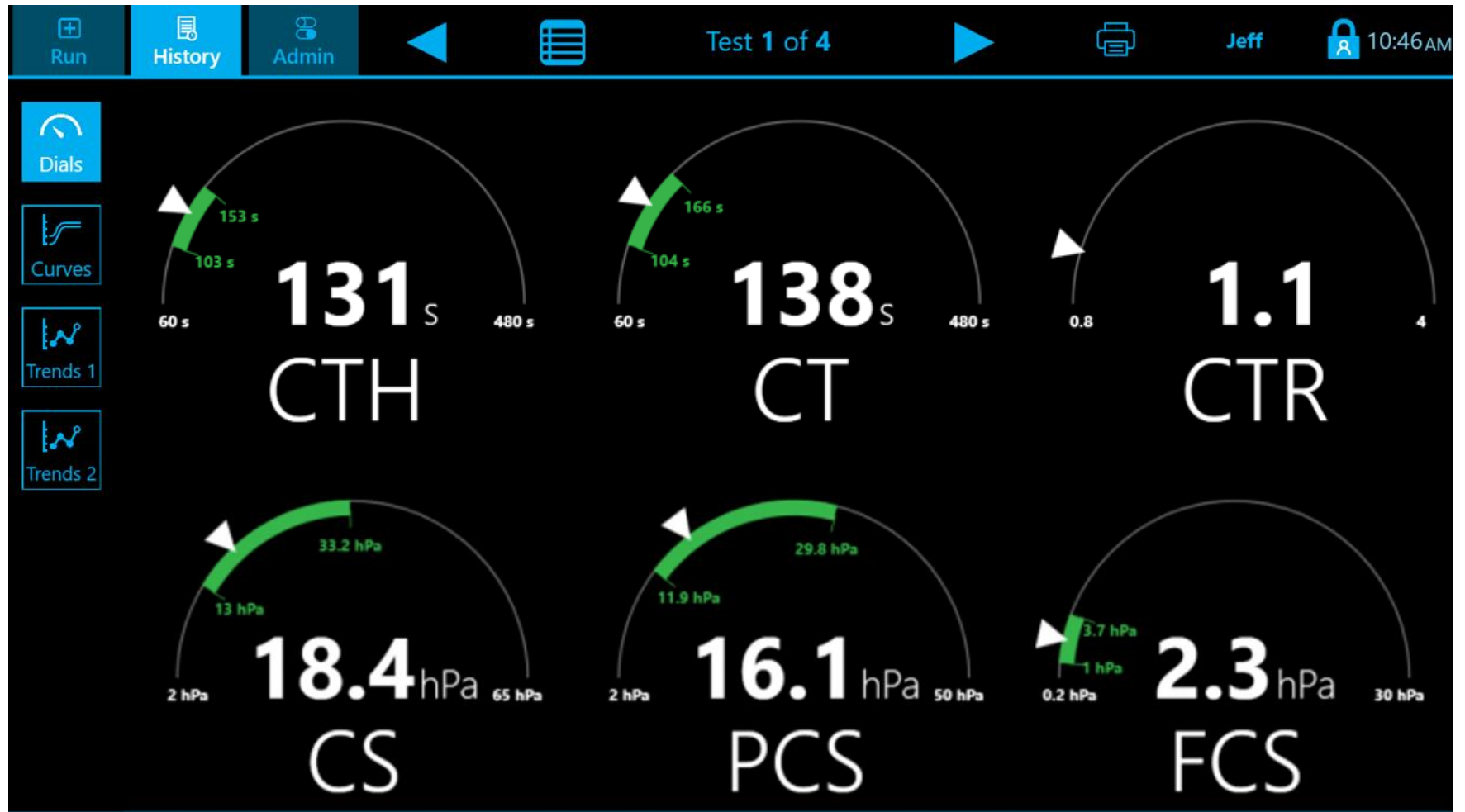
Test Result	Units	Description
CT	sec	Clot time measured with kaolin activation
CTH	sec	Clot time measured with kaolin activation and with heparin neutralization
CS	hPa	Clot stiffness measured with thromboplastin activation and with polybrene (heparin neutralizer)
FCS	hPa	Clot stiffness measured with thromboplastin activation and with polybrene and abciximab
PCS	hPa	Calculated from subtracting FCS from CS [<i>Unique to Quantra</i>]
CTR	N/A	Calculated ratio of CT over CTH [<i>Unique to Quantra</i>]

The screenshot shows the QPlus cartridge interface with the following parameters displayed in gauges:

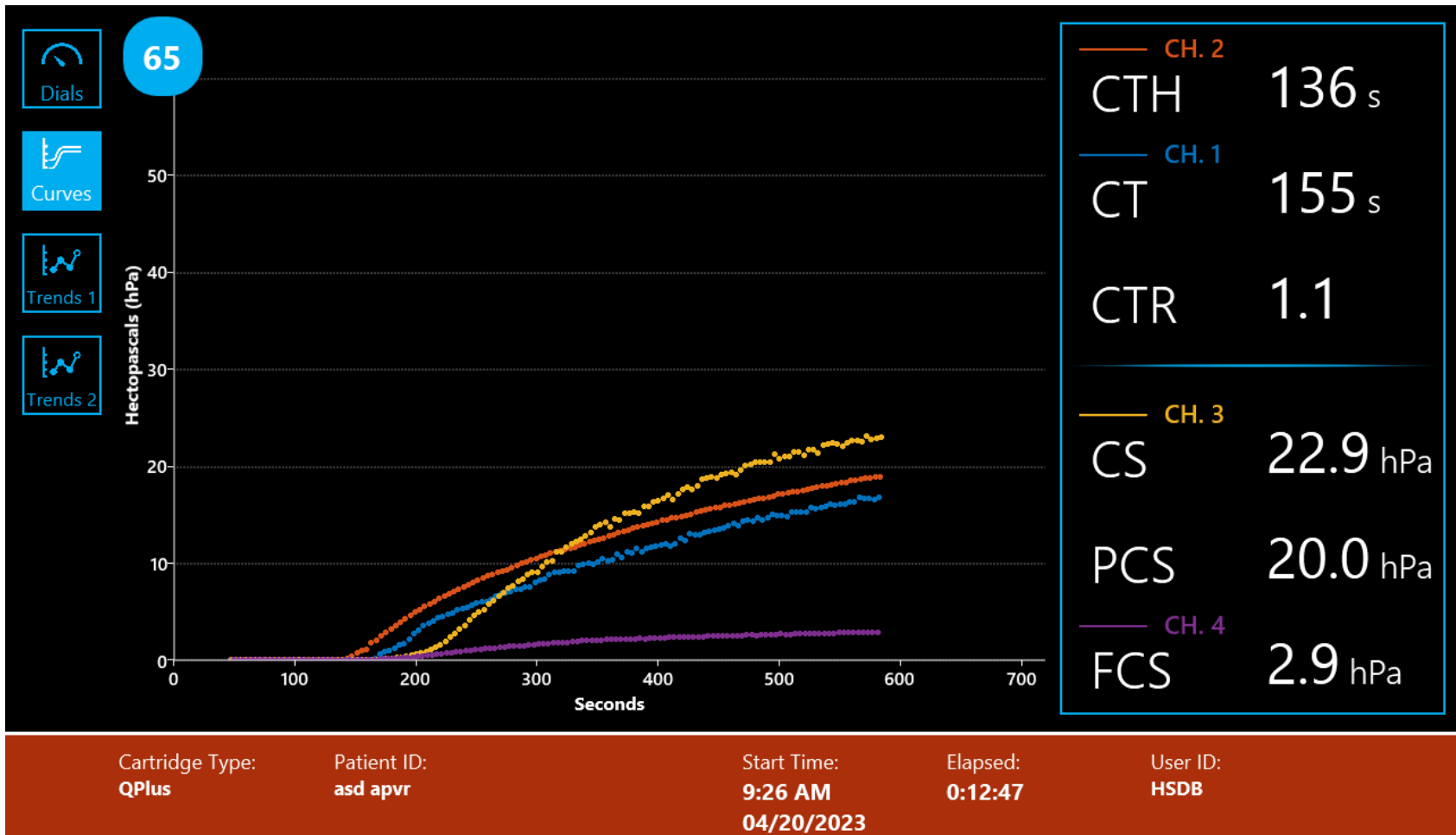
- CTH:** 131 s (range 60 s to 480 s)
- CT:** 138 s (range 60 s to 480 s)
- CTR:** 1.1 (range 0.8 to 4)
- CS:** 18.4 hPa (range 2 hPa to 65 hPa)
- PCS:** 16.1 hPa (range 2 hPa to 50 hPa)
- FCS:** 2.3 hPa (range 0.2 hPa to 30 hPa)

abciximab: platelet inhibitor (blocks the GPIIb-IIIa fibrinogen receptor)

QPlus® Dials Screen

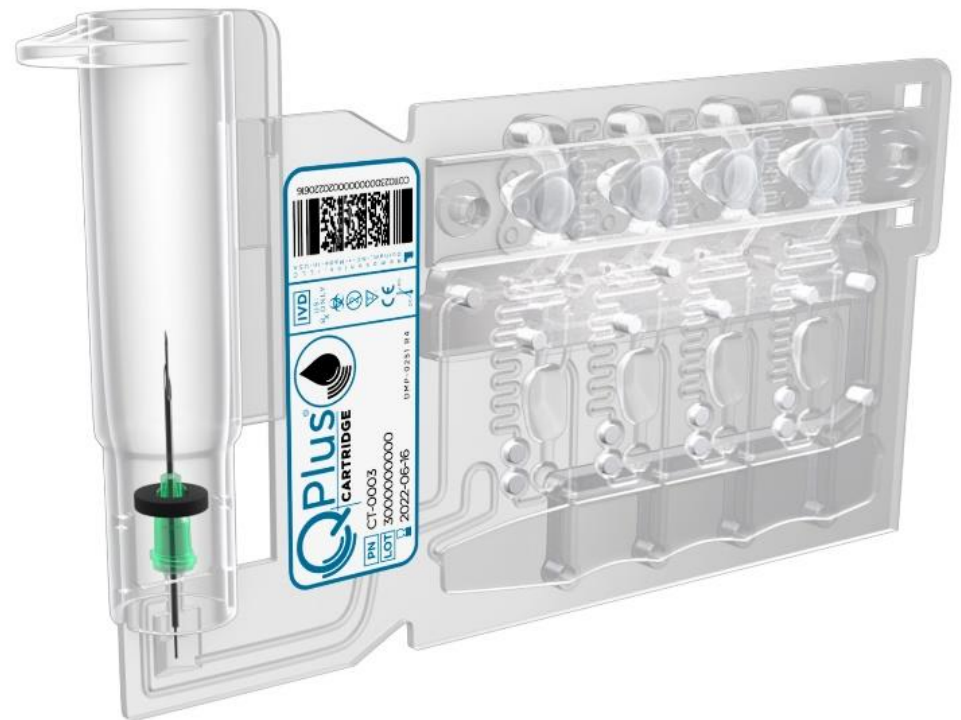


QPlus[®] Curves Screen



Reading the QPlus® Parameters

- CS, FCS and PCS are determined between **7.5 - 18 minutes** after the clot is detected
- The maximum amount of time for measurement is **25 minutes**



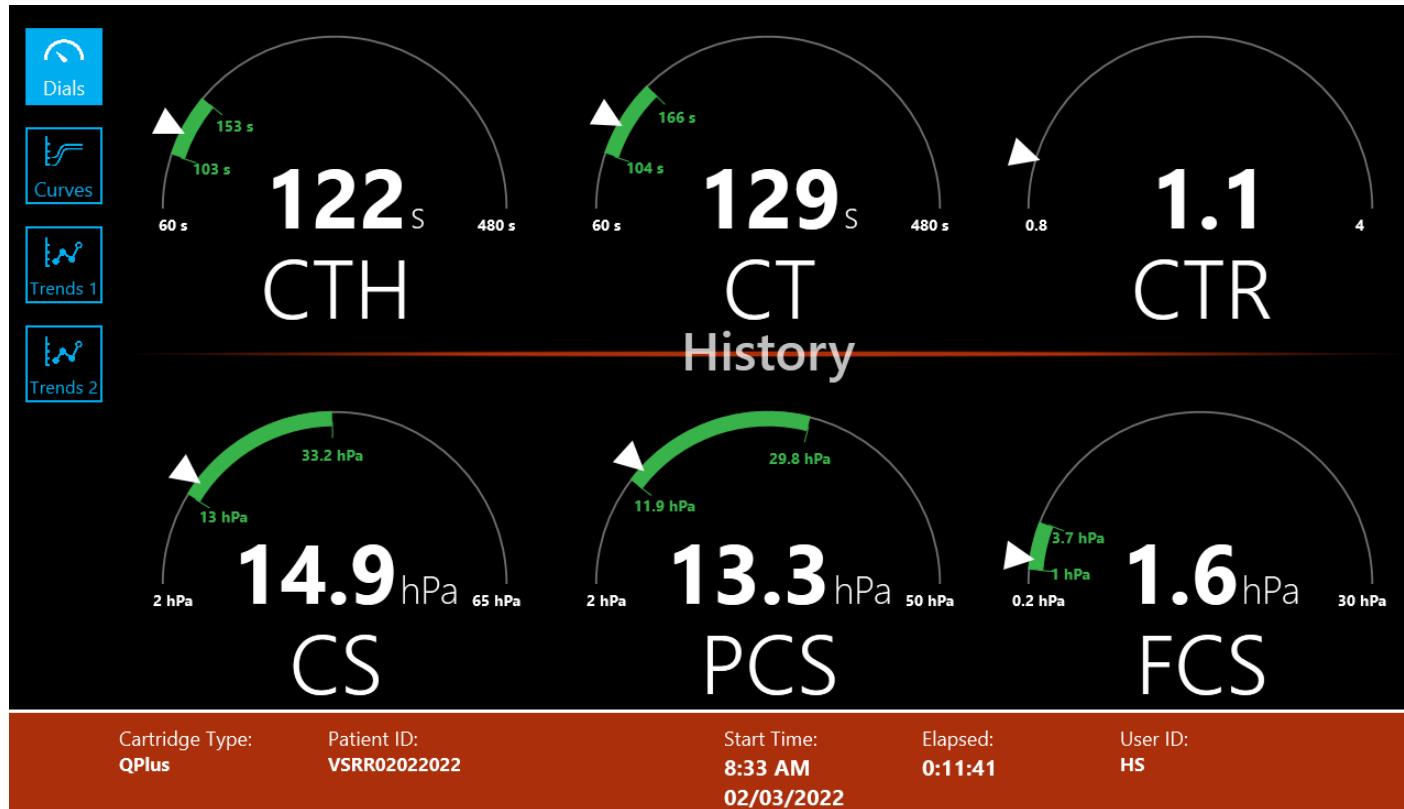


HemoSonics Quantra Principles of interpretation

Actual Qplus Cardiac Case Reviews

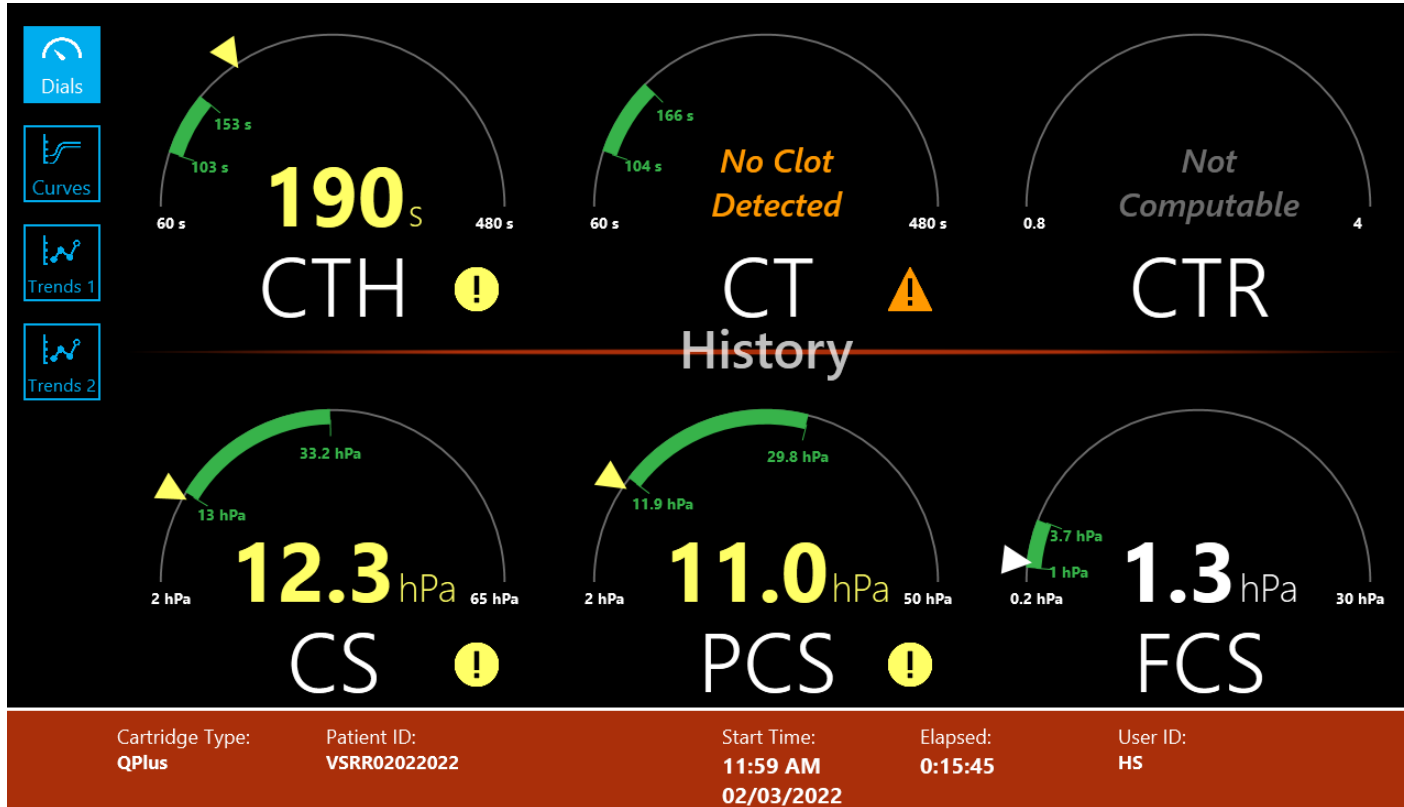


Qplus: Valve Sparing Aortic Root Repair – Baseline

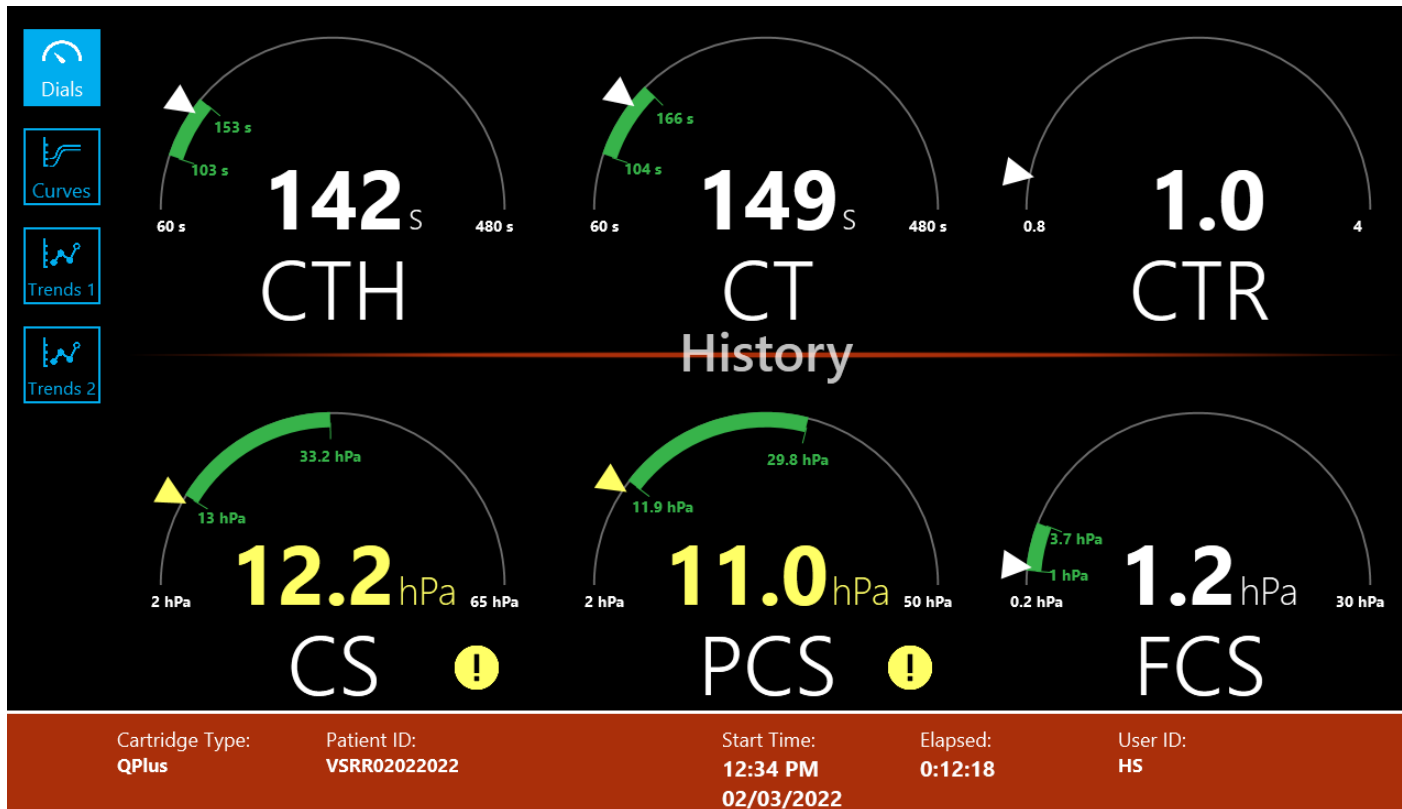




Valve Sparing Aortic Root Repair - Warming

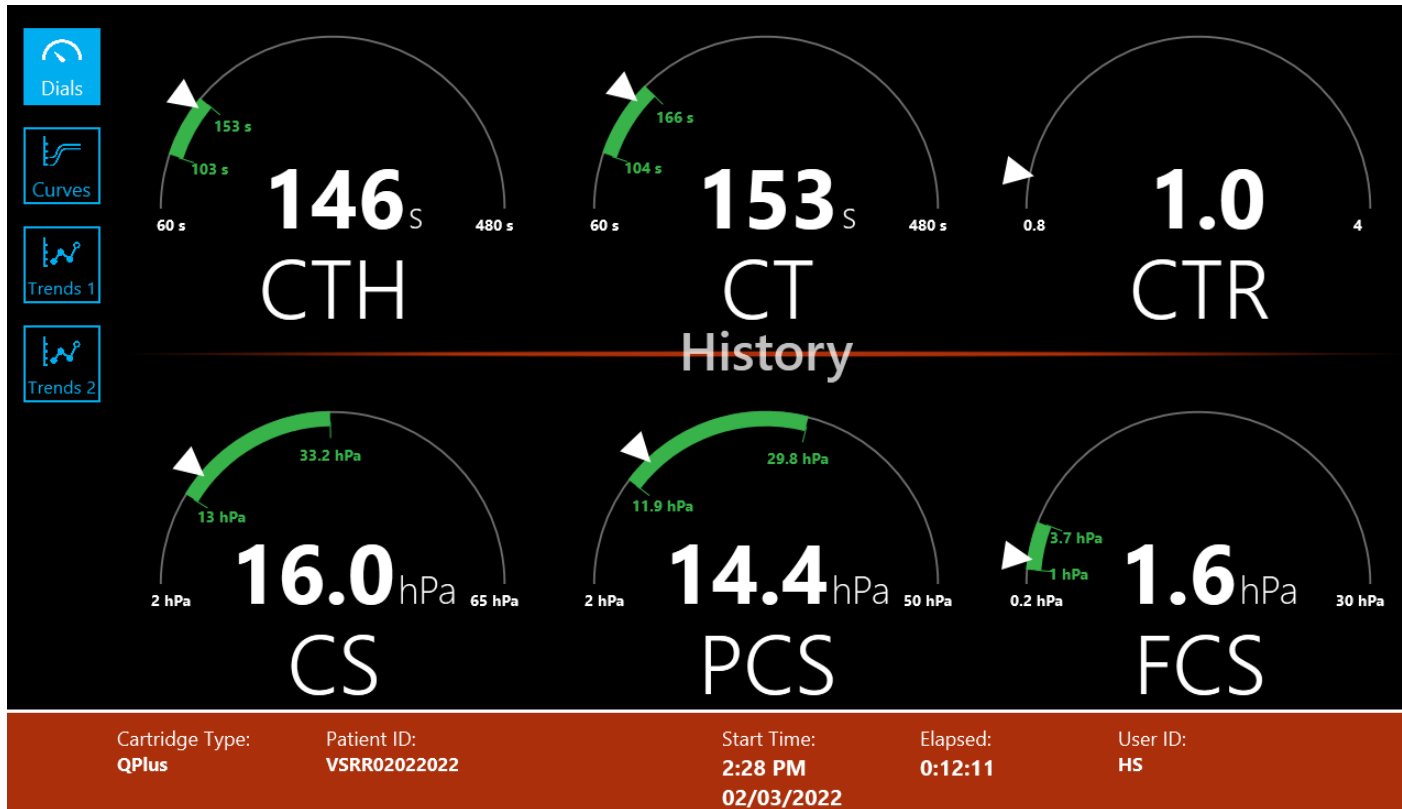


Valve Sparing Aortic Root Repair – Post-Protamine



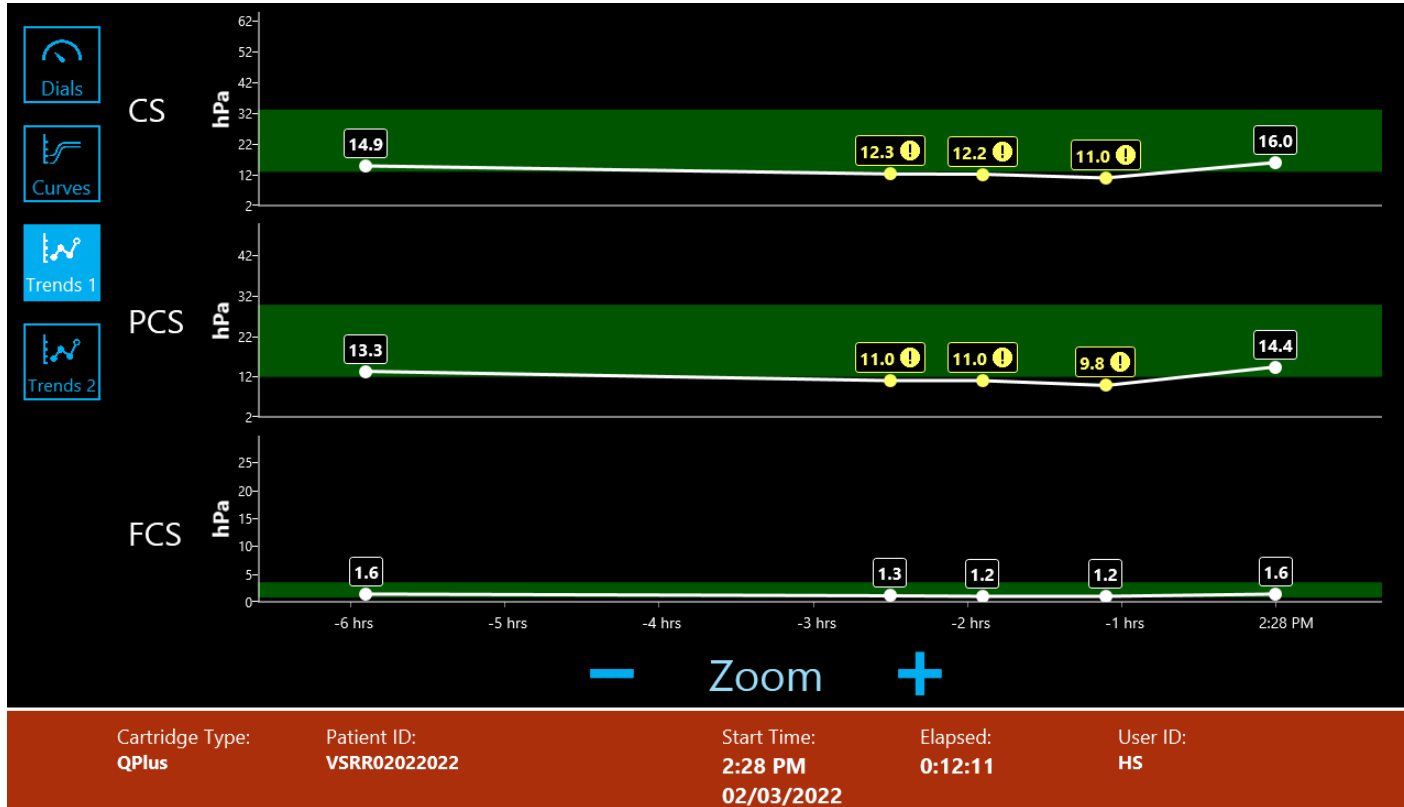


Valve Sparing Aortic Root Repair – Post second PLT



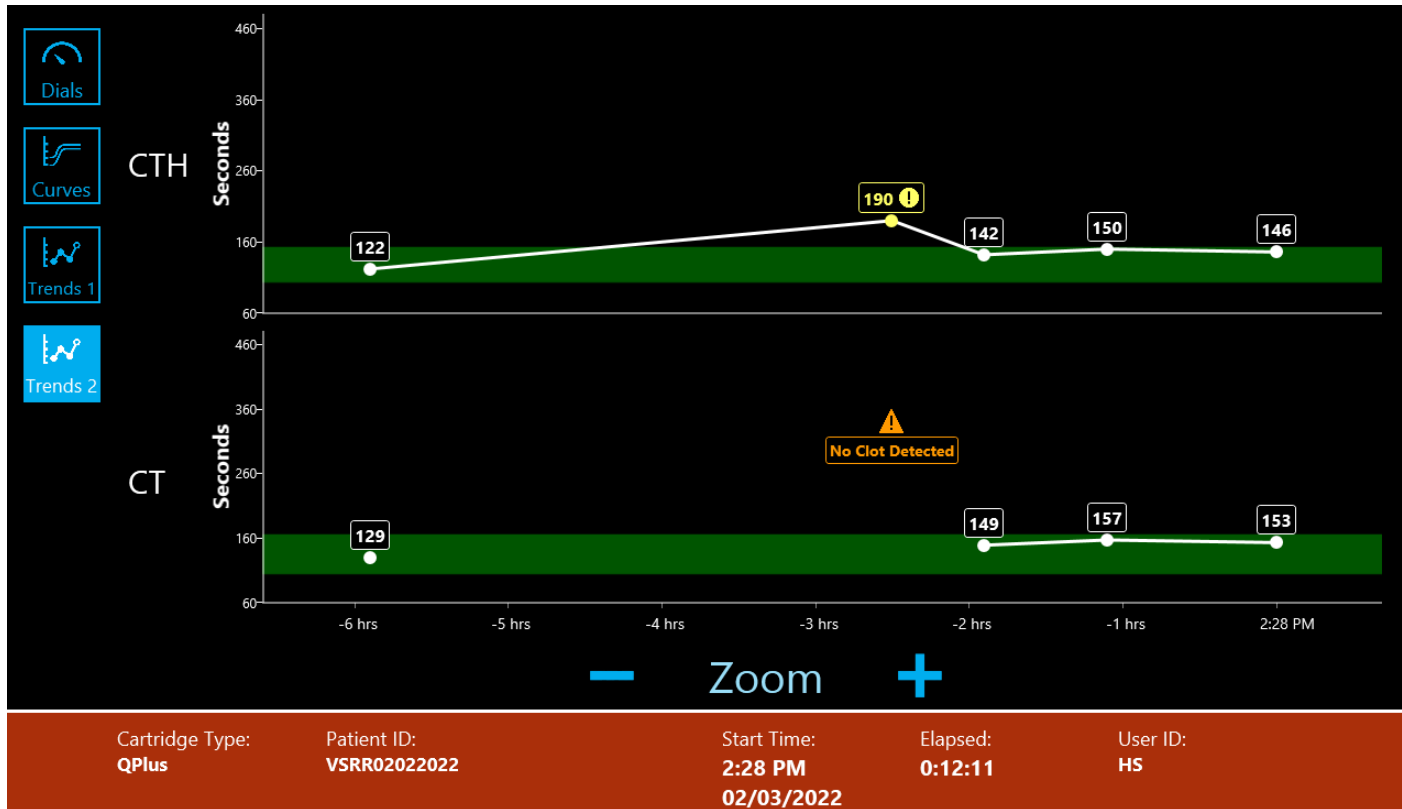


Valve Sparing Aortic Root Repair – Trends



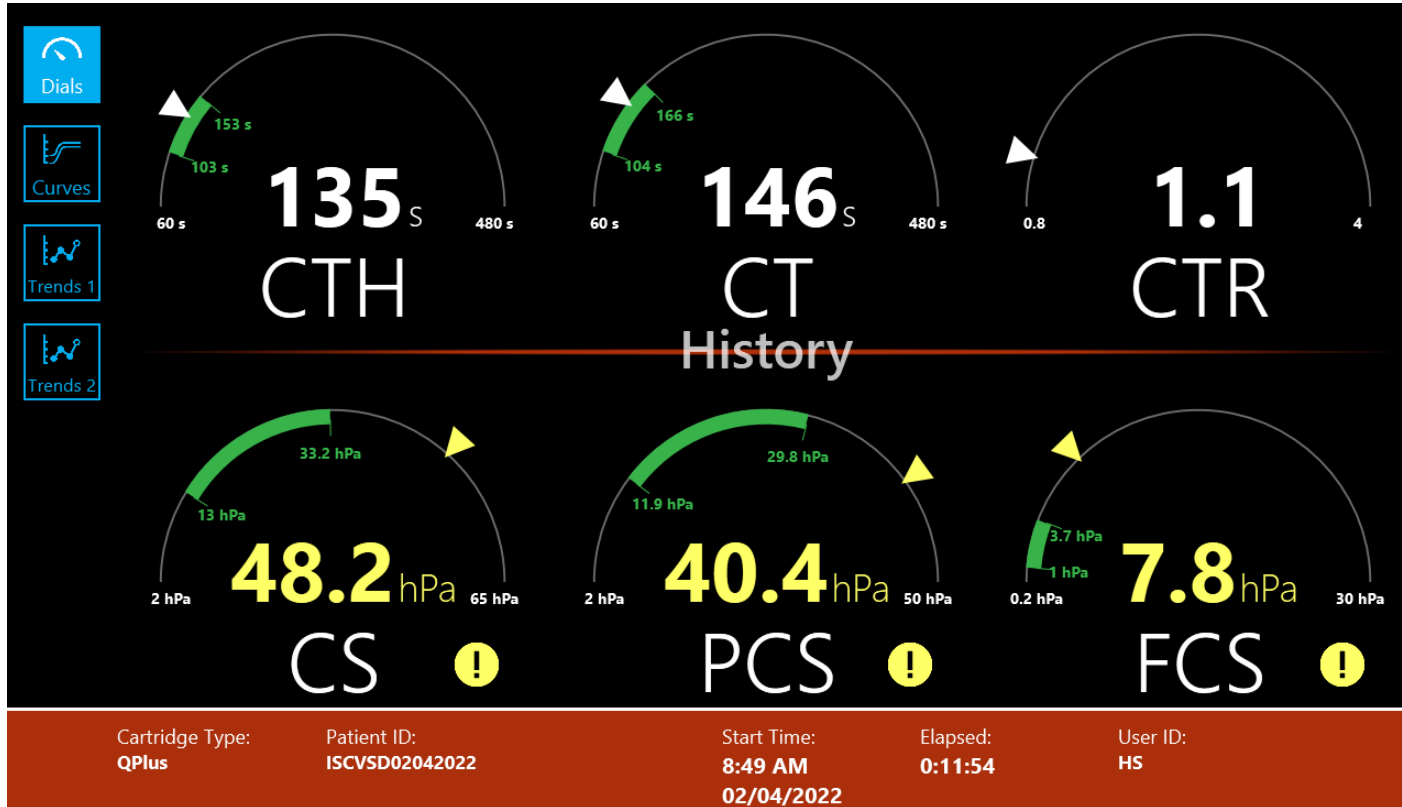


Valve Sparing Aortic Root Repair – Trends



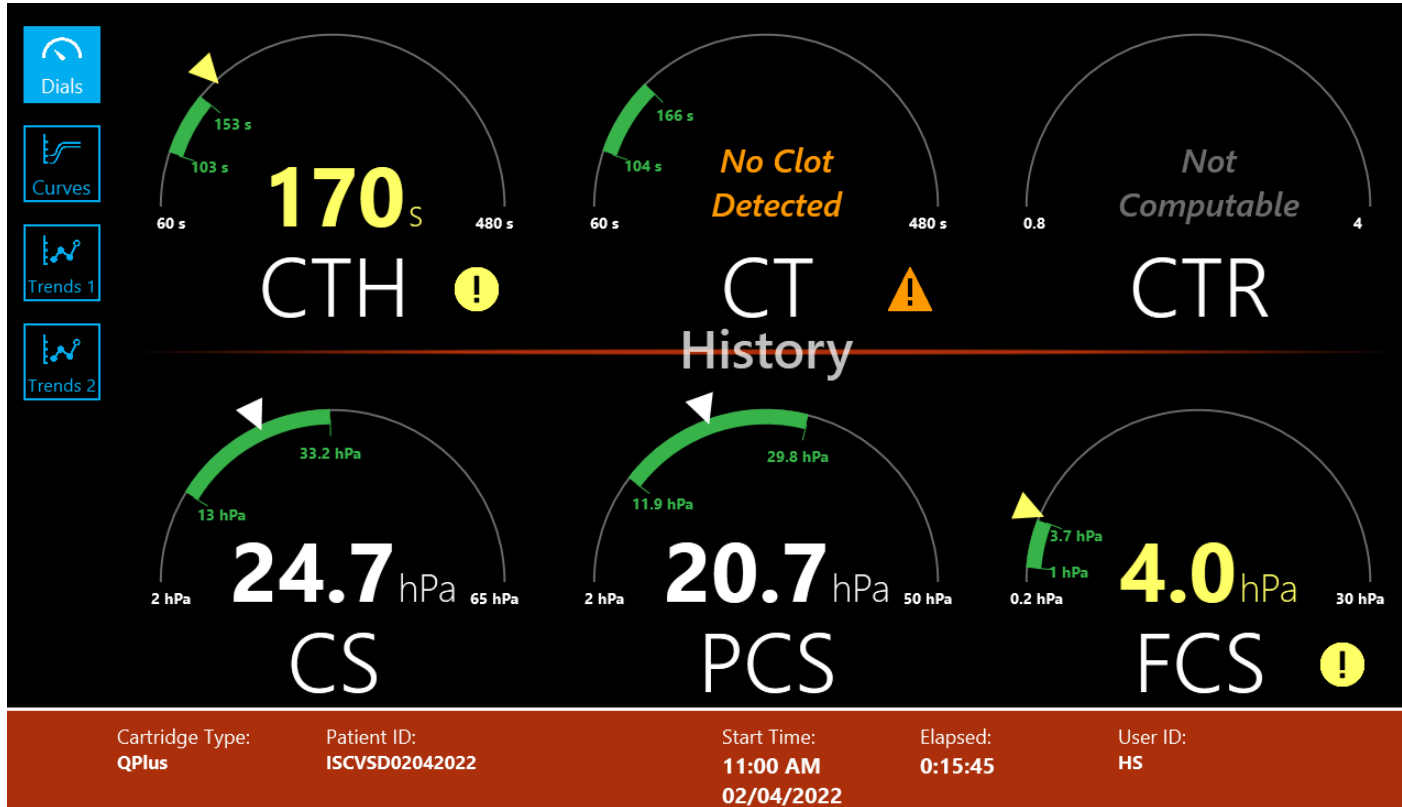


Qplus: Ischemic VSD – Baseline



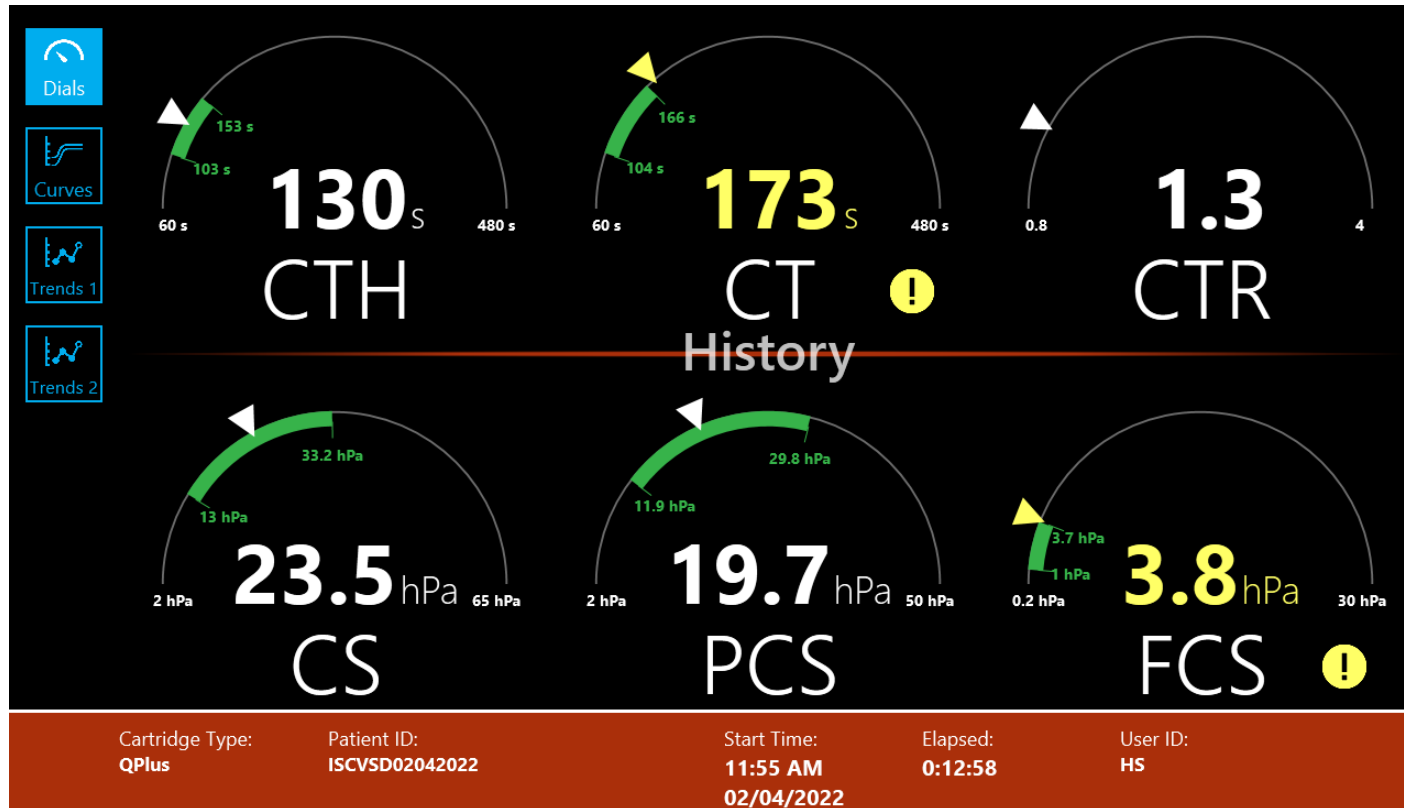


Ischemic VSD - Warming



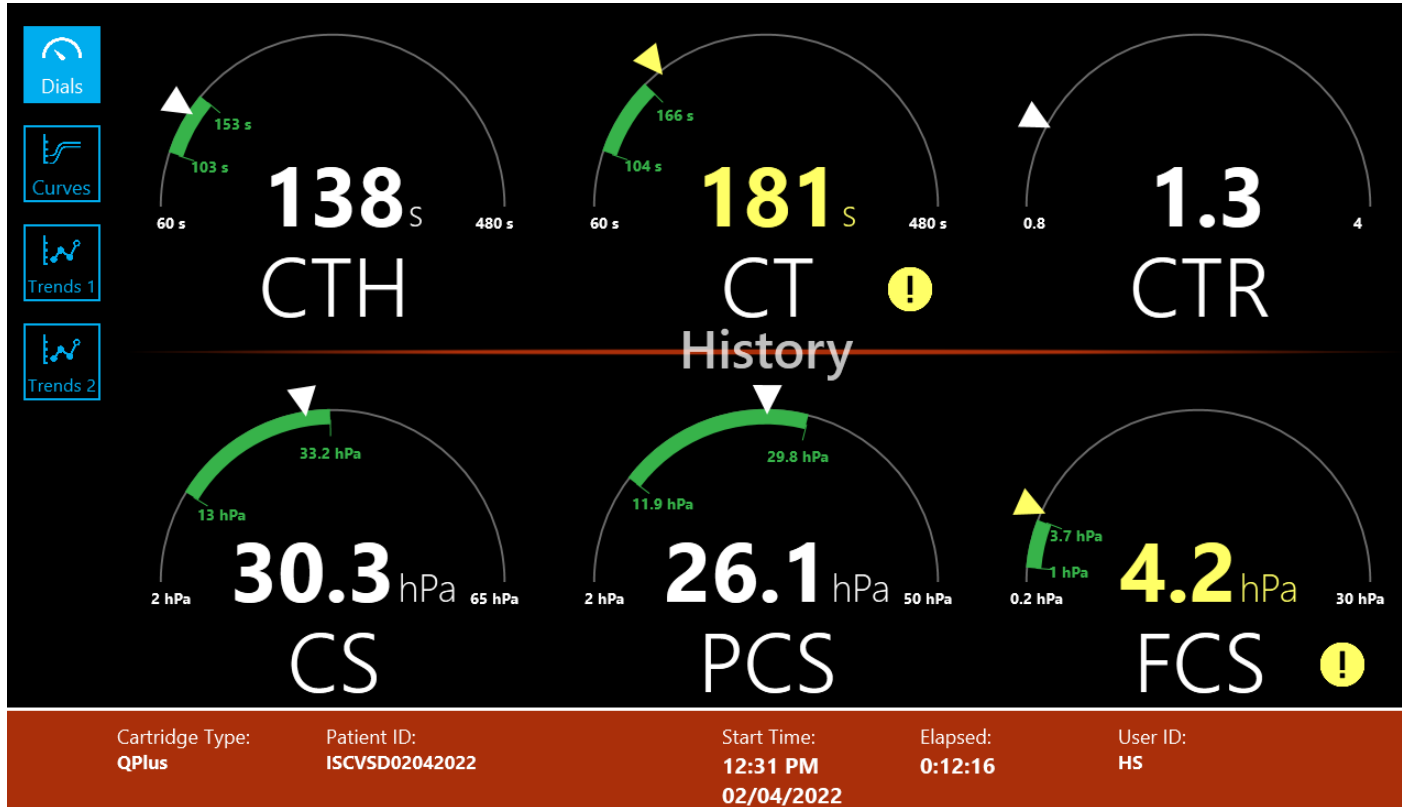


Ischemic VSD – Post-Protamine



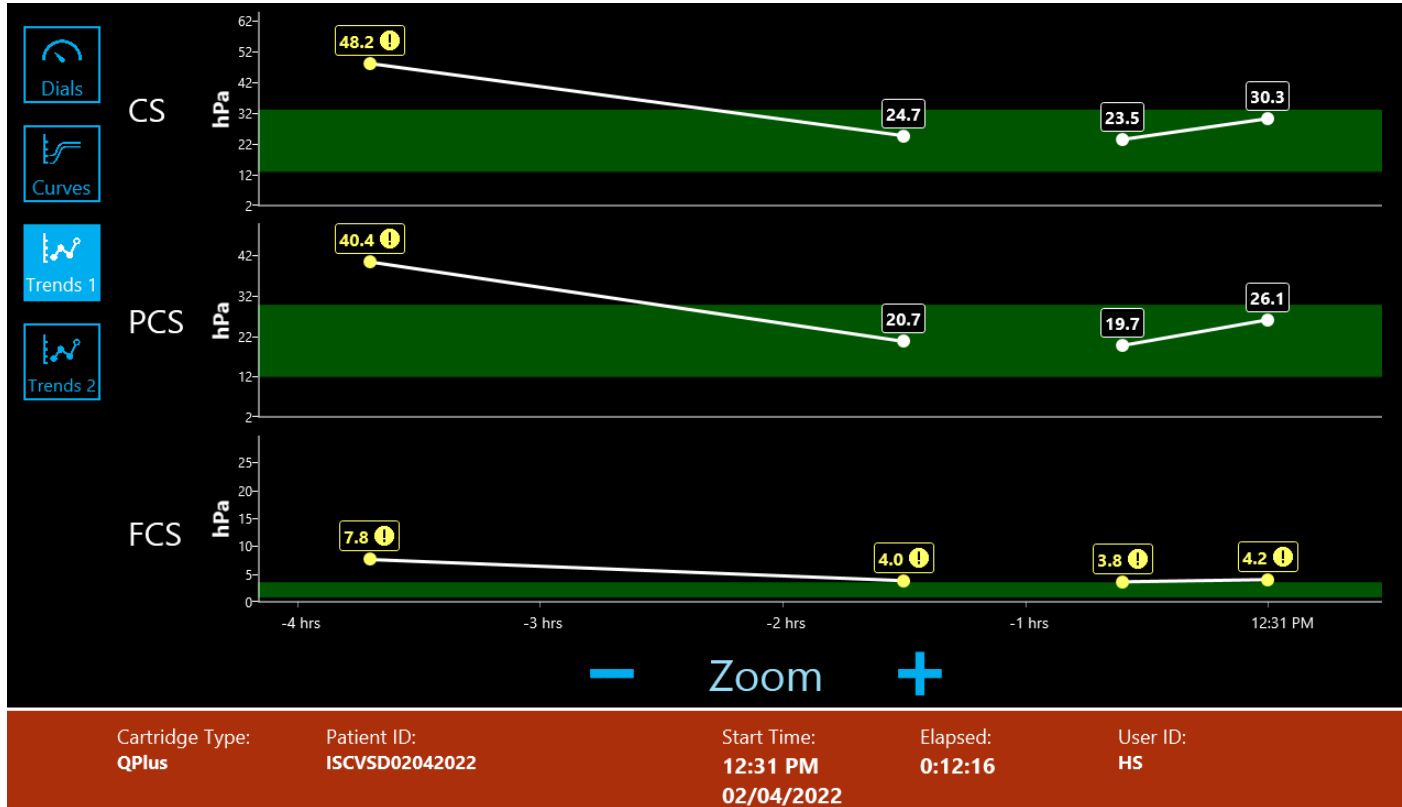


Ischemic VSD – Post 2 Units of PLTS



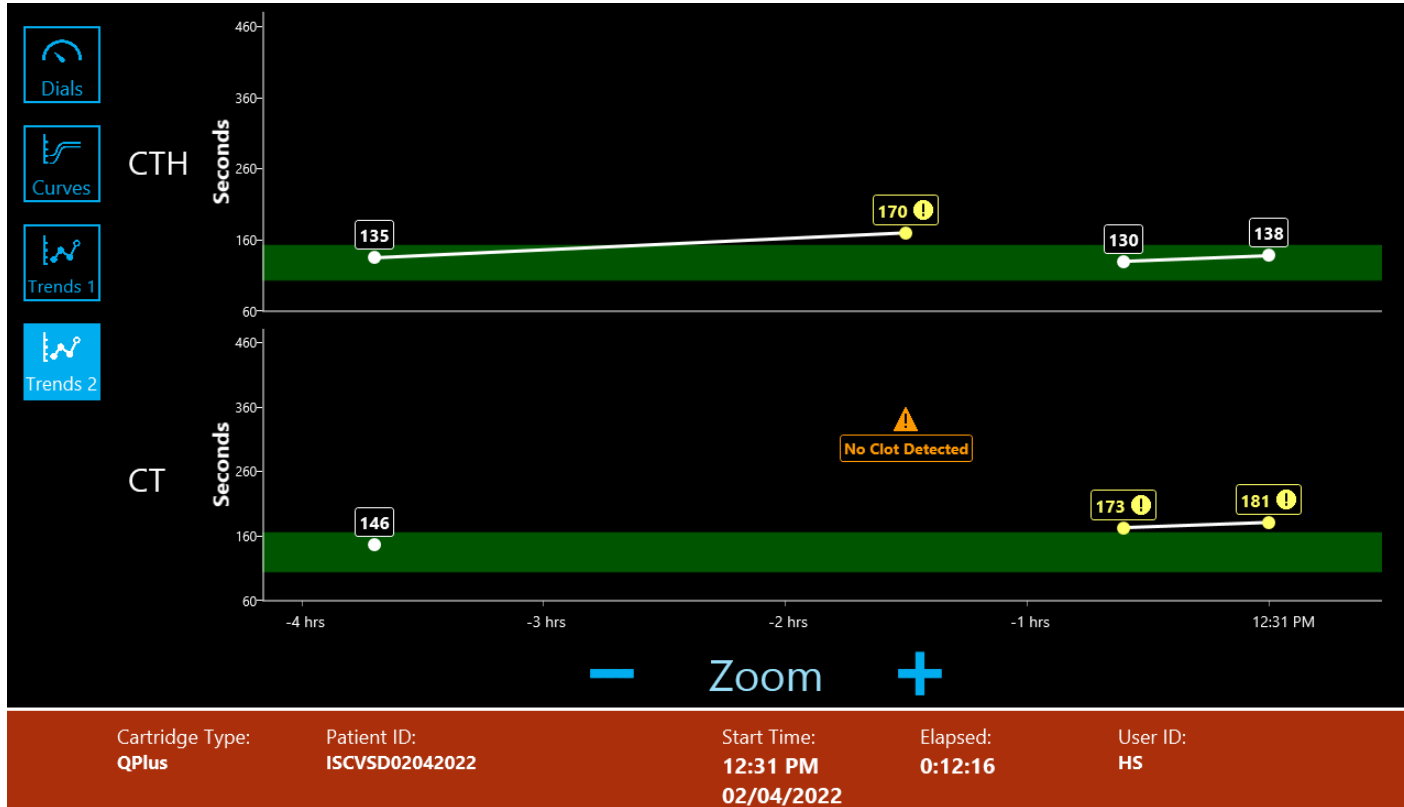


Ischemic VSD – Trends





Ischemic VSD – Trends





The End